CLAIMS

1. A device for performing an assay, which device comprises a substrate having oriented through-going channels, said channels opening out on a surface for sample application, the channels in at least one area of the surface for sample application being provided with a first binding substance capable of binding to an analyte, wherein the substrate is an electrochemically manufactured metal oxide membrane.

2. The device according to claim 1, wherein the first binding substance is chosen from the group consisting of a nucleic acid probe, an antibody, an antigen, a receptor, a hapten and a ligand for a receptor.

3. The device according to claim 1 or 2, wherein the first binding substance is covalently bound to the substrate.

4. The device according to any of the preceding claims, wherein the metal oxide membrane is comprised of aluminium oxide.

5. A method of manufacturing a device according to any of the preceding claims, wherein the first binding substance is synthesised in situ.

6. The method according to claim 5, wherein a compound for synthesising the first binding substance is applied to a particular area using ink-jet technology.

7. The method according to claim 6, wherein the compound is applied using electrostatic attraction.

8. A method of manufacturing a device according to any of the claims 1 - 4, wherein the first binding substance is applied to a particular area using ink-jet technology.

9. The method according to claim 8, wherein the first binding substance is applied using electrostatic attraction.

10. Use of an electrochemically manufactured metal oxide membrane in the manufacture of a device according to any of the claims 1 - 4. performing a probe-based assay.

11. A kit comprising a device according to any of the claims 1 - 4, said kit additionally comprising a detection means for determining whether binding has occurred between the first binding substance and the analyte.

12. Kit according to claim 11 wherein the detection means comprises a second binding substance provided with a label.

13 Kit according to claim 12 wherein the label is capable of inducing a colour reaction and/or capable of bio- or chemo- or photoluminescence.

14. A method for the detection of an analyte in a sample comprising the steps of
   a) contacting the sample with a device according to any of the claims 1-4,
   b) allowing binding to take place between the first binding substance and the analyte
   c) detecting whether binding has occurred between first binding substance and analyte.

15 The method of claim 14 wherein the analyte comprises nucleic acid.

16. The method of claim 15 wherein the nucleic acid is derivable from human immunodeficiency virus.